INTRODUCTION

Addiction is a chronic condition with high general population prevalence and many public health impact. Quality of diagnostic criteria is important to allow early detection, facilitate access to treatment and reduced public health impact.

The current DSM-5 Substance Use Disorder (SUD) criteria have good validity, but further studies are needed:
- to better understand the importance and utility of the 11 current criteria
- to determine if they could be simplified for future revisions.

Item Response Theory (IRT) analysis provides important advantages in understanding item behavior (Embroton & Reise 2000), but few studies among clinical population seeking abstinence or use reduction in non-US clinical populations (Hasin, O’Brien et al. 2013, Shmulewitz et al. 2015, Hasin, et al., 2012).

There is some debate on the addition of craving for the improvement of SUD diagnosis and the need for all of the current 11 criterion (Hasin, O’Brien et al. 2013).

OBJECTIVE

1. To confirm unidimensionality of the DSM-5 SUD criteria
2. To investigate the relationships of the criteria to each other and the underlying latent trait
3. To determine if the items function differently in sub-groups for alcohol, opiates, cocaine, cannabis, and tobacco in French adult outpatient clinic subjects with a focus on craving

METHODS

Participants
From ADDICTAQUI cohort, Bordeaux, France, including:
- Substance users seeking treatment
- Recruited in French outpatient addiction clinics at their treatment entry
- At least one diagnosis of a SUD
- 18 y.o. and over

Procedure
Face-to-face research interviews by a trained interviewer

Measures
- Mini (International Neuropsychiatric interview) for 11 DSM-5 SUD criteria,
  Anxiety (at least one current generalized anxiety, panic with/without agoraphobia, social phobia) and Mood (at least one current major depressive and/or bipolar disorder) Disorders
- ASI (Addiction Severity Index) for sociodemographic (age, gender) and substances use

Analyses conducted separately for each substance among current users (at least 2 times per week during 12 months): alcohol (n = 787), opiates (n = 131), cocaine (n = 141), cannabis (n = 504) and tobacco (n = 1014)

Dimensionality: fit a one-factor Confirmatory Factor Analysis (CFA), based on the root mean square error of approximation (RMSEA ≤ 0.06) and fit indices (CFI/TLI ≥ 0.95) (Hu et Bentler 1999)

Item Response Theory (IRT) models and Differential Item & Test Functioning (DIF/DTF): the 2-parameter logistic item response theory model to all 11 criteria of DSM-5 SUD:
- Estimate difficulty: the parameter diagnostic criteria parameters
- DIF (differences of difficulty parameters) & DTF (average difference in the expected number of criteria for individuals with the same trait severity in different subgroups) by gender, age, mood & anxiety disorder

RESULTS

DSM-5 Current Substances Use Disorder

<table>
<thead>
<tr>
<th>Substance</th>
<th>Severe</th>
<th>60% Moderate</th>
<th>40% Mild</th>
<th>No diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>6.88</td>
<td>6.69</td>
<td>7.22</td>
<td>7.37</td>
</tr>
<tr>
<td>Cannabis</td>
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<tr>
<td>Cocaine</td>
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<tr>
<td>Opiates</td>
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<tr>
<td>Tobacco</td>
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</tr>
</tbody>
</table>

Dimensionality: Unidimensionality is confirmed, good fit indices and factor loading:
- For alcohol, cocaine, opiates, and cannabis, but not for tobacco

CONTACTS:
charlotte.kervran@u-bordeaux.fr
marc.auriacome@u-bordeaux.fr

Financial Support: French Government Addiction Agency MILDECA, Foundation Bordeaux University